

Lockheed Martin Corporation
Corporate Environment, Safety & Health
West Coast Projects Office
2550 North Hollywood Way, 3rd Floor, Burbank, CA 91505-1055
Facsimile 818-847-0256 or 818-847-0170

SFUND RECORDS CTR
2462-00250

SFUND RECORDS CTR
110333

LOCKHEED MARTIN



January 28, 2002

Mr. Gerard J. Thibeault
Executive Officer
California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, California 92501-3339

Dear Mr. Thibeault:

In accordance with the approved Water Supply Contingency Plan, enclosed is one copy of the November 2001 production well sampling report prepared by Earth Tech for Lockheed Martin Corporation. This report presents results from samples collected at Bunker Hill Basin production wells in November 2001.

Should you have any questions or comments, please contact me at 818-847-0197.

Sincerely,

Gene Matsushita

GM:lg

Attachment

c: See Distribution List

Mr. Gerard J. Thibeault
January 28, 2002
Page 2

Distribution List

(Abbreviated Report without Attachments "A" & "B", which are available upon request)

Kim Alexander, Psomas Engineering
Chris Bahnsen, San Bernardino Valley Water Conservation District
Kalyanpur Baliga, Department of Health Services (San Bernardino)
Mary Bridgewater, Department of the Air Force, AFBCA
W. William Bryden, City of San Bernardino
Tom Crowley, San Bernardino Valley Water Conservation District
Dodie Farmer, Victoria Farms Mutual Water Company
Douglas Headrick, City of Redlands
Ross Lewis, Gage Canal Company
Steve Mains, Western Municipal Water District
Morris Matson, Loma Linda University
•Kevin Mayer, US EPA (Region IX)
Eugene McMeans, Riverside Highland Water Company
Zahra Panahi, City of Riverside
Dan Randall, City of Riverside
Bob Reiter, San Bernardino Valley Municipal Water District
Steve Williams, Department of Health Services (San Diego)
Alain Sharp, Earth Technology Corporation
Greg Snyder, City of Loma Linda
Glen Thomas, Mountain View Power Company
Dieter Wirtzfeld, City of Riverside

Mr. Gerard J. Thibeault
January 28, 2002
Page 3

bc: Gallop, Johnson & Neuman
101 S. Hanley Road
St. Louis, MO 63105
Attn: Michael Re

Highland Supply Corporation
111 Sixth Street
Highland, IL 62249
Attn: Donald E. Weder

Seven W Enterprises, Inc.
1500 Crafton Avenue
P.O. Box 111
Redlands, CA 92373-1730
Attn: Janet M. Weder

Mr. Gerard J. Thibeault
January 28, 2002
Page 4

Bc w/attach:

Doug Goins, LMC-Legal (Denver)
Ian Hutchison, TRC (Irvine)
Gail Rymer, LMC-Communications (Bethesda)
Bob Simpson, LMC (Riverside)
Jenny Stevens, LMC (Denver)
Matt Werner, Earth Tech (Long Beach)

BUR0102//027
Redlands

BUR027 WSCP ProdWellSampling1101.doc

January 28, 2002

Lockheed Martin Corporation
West Coast Project Office
2550 N. Hollywood Way, 3rd Floor
Burbank, California 91505

Telephone

Attention: Mr. Gene Matsushita
Project Supervisor

562.951.2000

Facsimile

Subject: November 2001 Data Report
Water Supply Contingency Plan
Production Well Sampling Program
Crafton-Redlands Plume Project

562.951.2100

Dear Mr. Matsushita:

This report presents a summary of results of the Water Supply Contingency Plan production well sampling for the month of November 2001. The Water Supply Contingency Plan (WSCP) was prepared by Lockheed Martin Corporation and submitted to the State of California Regional Water Quality Control Board (RWQCB) Santa Ana Region on September 30, 1996. The plan was conditionally approved by the RWQCB in a letter dated March 6, 1997. The WSCP for the Crafton-Redlands Plume was prepared to address maintenance of water supply to purveyors in the event that wells became impacted with trichloroethene (TCE) from the Crafton-Redlands TCE Plume. A summary of key dates and WSCP sampling program evolution is provided on Table 1.

The locations of the WSCP wells and analytical results for the November 2001 sampling event for TCE and perchlorate are shown on Figures 1 and 2, respectively. Table 2 presents a summary of analytical tests performed on each WSCP well and water system sampling point. The sampling frequency of each well is once a month for the first year. More frequent sampling, if required, is based on the analytical results as outlined in the WSCP TCE and perchlorate decision matrices, provided as Figures 3 and 4, respectively. The perchlorate decision matrix was presented in the Perchlorate Work Plan and Schedule, which was submitted to the RWQCB on August 15, 1997. The RWQCB approved the Perchlorate Work Plan on October 31, 1997. Table 3 presents a summary of the wells sampled twice monthly according to the decision matrices.

E A R T H  T E C H

A **tyco** INTERNATIONAL LTD. COMPANY

RESULTS

Summaries of the analytical results for the November 2001 WSCP sampling event for TCE and perchlorate are shown on Figures 1 and 2, respectively, and presented on Table 4. Available groundwater elevation data are provided on Table 5. The water sampling field forms are provided in Attachment A. Chain-of-custody, laboratory data sheets, and Level III laboratory quality assurance/quality control (QA/QC) documentation are provided in Attachment B.

Trichloroethene

Six groundwater samples collected in November met or exceeded 2/5th the MCL for TCE (i.e., were greater than or equal to 2.0 µg/L) including: Richardson #1 (2.1 µg/L), Gage 26-1 (6.6 µg/L), Gage 27-1 (2.3 µg/L), Gage 29-2 (4.3 µg/L), Gage 29-3 (5.3 µg/L), Gage 51-1 (2.0 µg/L). The TCE impacts at Gage 26-1, Gage 27-1, Gage 29-2 and Gage 29-3 are partially attributed to the Norton AFB plume and partially attributed to the Crafton Redlands plume.

The following wells were in TCE treatment this month: Gage 26-1, Gage 27-1, Gage 29-2, Gage 29-3. Therefore, these four wells will be sampled once a month for TCE when active.

Richardson #1 and Gage 51-1 will now be sampled twice a month for TCE in accordance with the WSCP TCE decision matrix, supplied as Figure 3.

Perchlorate

In the November WSCP sampling, perchlorate was detected at or above 75 percent of the PAL (i.e., greater than or equal to 13.5 µg/L) in Richardson #1 (21 µg/L), Gage 29-2 (22 µg/L), Gage 29-3 (40 µg/L), Gage 51-1 (41 µg/L), Gage 66-1 (15 µg/L) and Gage 92-1 (15 µg/L).

Gage 29-2, Gage 29-3, Gage 51-1, Gage 66-1, Gage 92-1 and COLL Richardson #1 wells are currently being sampled twice a month for perchlorate, if active.

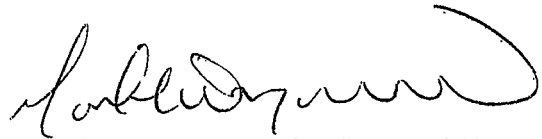
CLOSING

Earth Tech greatly appreciates being of continued service to Lockheed Martin Corporation on this project. Should you have any questions or comments, please do not hesitate to call.

Sincerely,
Earth Tech



Eric Peterson, P.E.
Program Director



Matthew Werner, R.G., C.E.G., C.H.
Project Manager

TABLES

TABLE 1

KEY PROJECT DATES AND WSCP SAMPLING PROGRAM EVOLUTION

August 2, 1996, the RWQCB – Santa Ana Region requested Lockheed Martin to submit a conceptual Water Supply Contingency Plan.
September 30, 1996, Lockheed Martin submitted the Water Supply Contingency Plan (WSCP) to the RWQCB – Santa Ana Region.
March 6, 1997, the RWQCB conditionally approved the WSCP, which included sampling eight production wells (City of Loma Linda Richardson #1, Richardson #2, Mountain View #1, Mountain View #2, Victoria Farms Mutual Water Company Wells #1 and #3, and Southern California Edison #1 and #2).
June 1997, Victoria Farms Mutual Water Company was connected of City of San Bernardino Water. Pumping ceased at VFMWC #1 and #3, and the two wells were removed from the program.
June 1997, sampling of SCE #1 was discontinued because it is not operated on a regular basis. The WSCP consists of five wells, including COLL Mountain View #1 and #2, COLL Richardson #1 and #2, and SCE #2 (AUX).
August 1997, the WSCP was expanded due to the detection of perchlorate in municipal supply wells in the Bunker Hill Basin. Twenty-six wells were added to the WSCP including nineteen City of Riverside wells, five City of Redlands wells, and two Loma Linda University wells, for a total of 31 wells.
October 1997, three City of Riverside water system sampling points were added to the WSCP, including the Gage system pipeline (Gage Delivery), the Waterman system pipeline (Iowa Booster), and the sampling station measuring outflow from the Linden and Evans Reservoirs (7 th & Chicago).
March 1998, two City of Loma Linda water system sampling points were added to the WSCP, including the Mountain View system pipeline (Mountain View Blend at Lawton) and the Richardson system pipeline (Richardson Blend).
June 1998, one City of Riverside irrigation water system sampling point (Gage Arlington) and one additional City of Loma Linda water system sampling point (Mountain View Blend at Timoteo) were added to the WSCP.
December 1998, the COLL Richardson #3 well was added to the WSCP Sampling Program.
May 1999, Sampling of Mountain View Blend at Timoteo was discontinued because it does not represent a blend sample of the Mountain View pipeline system.
December 1999, the COLL Mountain View #3 well and the Gage 98-1 well were added to the WSCP Sampling Program
February 2000, the COLL Richardson #2 well was decommissioned, and therefore removed from the WSCP Sampling Program.
May 2000, Mountain View #2 was decommissioned, and therefore removed from the WSCP Sampling Program.
October 2000, COLL Mountain View #4 and COLL Richardson #4 were added to the WSCP Sampling Program.

TABLE 2

WSCP PRODUCTION WELL SAMPLING PROGRAM

Well Number	Well Name	Perchlorate	TCE
City of Loma Linda			
3106	Mountain View #3	X	X
3171	Mountain View #4	X	X
693	Richardson #1	X	X
707	Richardson #3	X	X
3132	Richardson #4	X	X
City of Loma Linda Water System Sampling Points			
2967	Mountain View Blend - Lawton	X	X
2968	Richardson Blend	X	X
Southern California Edison			
554	SCE #2 (AUX)	X	X
Loma Linda University			
267	LL Univ Anderson #2	X	
717	LL Univ Anderson #3	X	
City of Riverside (Gage System)			
252	Gage #26-1	X	X
258	Gage #27-1	X	X
259	Gage #27-2	X	X
260	Gage #29-1	X	X
219	Gage #29-2	X	X
220	Gage #29-3	X	X
218	Gage #30-1	X	X
214	Gage #31-1	X	X
215	Gage #46-1	X	X
253	Gage #51-1	X	X
216	Gage #56-1	X	X
257	Gage #66-1	X	X
644	Gage #92-1	X	X
641	Gage #92-2	X	X
642	Gage #92-3	X	X
3091	Gage #98-1	X	X
City of Riverside (Waterman System)			
273	Hunt #6	X	
271	Hunt #10	X	
272	Hunt #11	X	
City of Riverside Water System Sampling Points			
2946	Iowa Booster (Waterman)	X	X
2947	Gage Delivery (Gage)	X	X
2948	7th & Chicago (Reservoir)	X	X
3018	Gage Arlington	X	
City of Redlands			
542	COR Church St	X	
2673	COR #38	X	
535	COR Mentone Acres	X	
29	COR Orange St	X	
74	COR Rees	X	X

Notes:

TCE = Trichloroethene

Perchlorate analyzed using DHS Method (EPA 300.0 Modified)

TCE analyzed using EPA Method 502.2

TABLE 3

WSCP PRODUCTION WELL SAMPLING PROGRAM
NOVEMBER 2001 WELLS SAMPLED TWICE MONTHLY

Well Number	Well Name	Perchlorate	TCE
City of Loma Linda			
693	Richardson #1	X	X
City of Riverside (Gage System)			
219	Gage #29-2	X	
220	Gage #29-3	X	
253	Gage #51-1	X	X
257	Gage #66-1	X	
644	Gage #92-1	X	

Notes:

TCE = Trichloroethene

Perchlorate analyzed using DHS Method (EPA 300.0 Modified)

TCE analyzed using EPA Method 502.2

TABLE 4

**WSCP PRODUCTION WELL SAMPLING PROGRAM
NOVEMBER 2001 DATA RESULTS**

Well Number	Well Name	Sample Date	Perchlorate (ug/L) Del Mar	TCE (ug/L) Del Mar
City of Loma Linda				
3106	Mountain View #3 ^a	NS	NS	NS
3171	Mountain View #4 ^{ac}	NS	NS	NS
693	Richardson #1*	11/1/2001	21	2.1
693	Richardson #1*	11/15/2001	6.6	ND (0.5)
707	Richardson #3 ^a	NS	NS	NS
3132	Richardson #4 ^a	NS	NS	NS
City of Loma Linda Water System Sampling Points				
2967	Mountain View Blend - Lawton	11/1/2001	ND (4.0)	ND (0.5)
2968	Richardson Blend	11/1/2001	ND (4.0)	ND (0.5)
Mountain View Power (Formerly Southern California Edison)				
554	SCE #2 (AUX) ^a	11/2/2001	ND (4.0)	ND (0.5)
Loma Linda University				
267	LL Univ Anderson #2	11/1/2001	ND (4.0)	NA
717	LL Univ Anderson #3	11/1/2001	ND (4.0)	NA
City of Riverside (Gage System)				
252	Gage #26-1 ^b	11/2/2001	8.1	6.6
258	Gage #27-1 ^b	11/2/2001	7.0	2.3
259	Gage #27-2	11/2/2001	12	ND (0.5)
260	Gage #29-1	11/2/2001	8.8	NA
219	Gage #29-2 ^{b*}	11/2/2001	22	4.3
219	Gage #29-2 ^{b*}	11/15/2001	22	NA
220	Gage #29-3 ^{b*}	11/2/2001	40	5.3
220	Gage #29-3 ^{b*}	11/15/2001	39	NA
220	Gage #29-3 ^{b*} (Duplicate)	11/15/2001	39	NA
218	Gage #30-1 ^a	NS	NS	NS
214	Gage #31-1	NS	NS	NS
215	Gage #46-1	NS	NS	NS
253	Gage #51-1*	11/2/2001	41	2.0
253	Gage #51-1* (Duplicate)	11/2/2001	39	1.8
216	Gage #56-1 ^a	NS	NS	NS
257	Gage #66-1*	11/2/2001	15	1.3
644	Gage #92-1 ^{b*}	11/2/2001	15	1.2
644	Gage #92-1 ^{b*}	11/15/2001	15	NA
641	Gage #92-2 ^a	NS	NS	NS
642	Gage #92-3 ^a	NS	NS	NS
3091	Gage #98-1 ^a	NS	NS	NS
City of Riverside (Waterman System)				
273	Hunt #6	NS	NS	NS
271	Hunt #10	NS	NS	NS
272	Hunt #11	NS	NS	NS
City of Riverside Water System Sampling Points				
2946	Iowa Booster (Waterman)	11/1/2001	ND (4.0)	ND (0.5)
2946	Iowa Booster (Waterman) Duplicate	11/1/2001	ND (4.0)	ND (0.5)
2947	Gage Delivery (Gage)	11/1/2001	9.6	0.56
2948	7th & Chicago (Reservoir)	11/1/2001	7.9	ND (0.5)
3018	Gage Arlington	11/1/2001	6.3	NA
City of Redlands				
542	COR Church St	NS	NS	NS
2673	COR #38 ^a	NS	NS	NS
535	COR Mentone Acres ^a	NS	NS	NS
29	COR Orange St ^a	NS	NS	NS
74	COR Rees	11/1/2001	6.6	NA

Notes:

* = Wells currently being sampled twice monthly for perchlorate and/or TCE

ND(4) = Not detected at the specified limit

NA = Not Analyzed

NS = Not Sampled

TCE = Trichloroethene

Perchlorate analyzed using DHS Method (EPA 300.0 Modified)

TCE analyzed using EPA Method 502.2

a = Well sampled on quarterly basis, if active

b = TCE treatment is installed

c = Water purged to waste and not into system

TABLE 5

**SUMMARY OF WATER LEVEL MEASUREMENTS
NOVEMBER 2001 SAMPLING EVENT**

Well Number	Well Name	Measure Date	Depth to Water	Measuring Point Elevation	Groundwater Elevation	Comments
City of Loma Linda						
3106	Mountain View #3	11/6/2001	131	1086	955	Pumping
3171	Mountain View #4	11/6/2001	249	1106	857	Pumping
693	Richardson #1	11/6/2001	179	1077	898	Pumping
707	Richardson #3	11/6/2001	225	1078.69	853.69	Pumping
3132	Richardson #4	11/6/2001	153	1074	921	Pumping
Mountain View Power (Formerly Southern California Edison)						
554	SCE #2 (AUX)	NM	NM	1100	NM	Static
Loma Linda University						
267	LL Univ Anderson #2	11/1/2001	NM	1075	NM	Pumping
717	LL Univ Anderson #3	11/1/2001	NM	1070	NM	Pumping
City of Riverside (Gage System)						
252	Gage #26-1	10/30/2001	96.60	1045.33	948.73	Pumping
258	Gage #27-1	10/30/2001	91.10	1044.64	953.54	Pumping
259	Gage #27-2	10/30/2001	81.20	1044.64	963.44	Static
260	Gage #29-1	10/30/2001	89.90	1044.43	954.53	Pumping
219	Gage #29-2	10/30/2001	92.70	1046.31	953.61	Pumping
220	Gage #29-3	10/30/2001	94.50	1048.75	954.25	Pumping
218	Gage #30-1	10/30/2001	187.20	1054.17	866.97	Pumping
214	Gage #31-1	10/30/2001	81.70	1054.64	972.94	Static
215	Gage #46-1	10/30/2001	90.00	1065.5	975.5	Static
253	Gage #51-1	10/30/2001	185.40	1044.64	859.24	Pumping
216	Gage #56-1	10/30/2001	184.90	1065.5	880.6	Pumping
257	Gage #66-1	10/30/2001	130.60	1044.85	914.25	Pumping
644	Gage #92-1	10/30/2001	187.80	1047.78	859.98	Pumping
641	Gage #92-2	10/30/2001	200.90	1053.38	852.48	Pumping
642	Gage #92-3	10/30/2001	212.90	1058.78	845.88	Pumping
3091	Gage #98-1	10/30/2001	191.00	1058.78	867.78	Pumping
City of Riverside (Waterman System)						
273	Hunt #6	10/2/2001	NM	1015.5	NM	Pumping
271	Hunt #10	10/1/2001	NM	1017	NM	Pumping
272	Hunt #11	NM	NM	1015.7	NM	Static
City of Redlands						
542	COR Church St	11/1/2001	148.0	1344.8	1196.8	Static
2673	COR #38	11/1/2001	101.0	1193	1092	Static
535	COR Mentone Acres	11/1/2001	227.0	1506.4	1279.4	Static
29	Cor Orange St	11/1/2001	84.0	1282	1198	Static
74	COR Rees	11/1/2001	284.0	1490	1206.0	Pumping

Notes:

All measurements reported in feet below measuring point (ft-bmp)

Water level measurements for all City of Loma Linda, City of Riverside, and City of Redlands wells were obtained by purveyor personnel.

Elevations given in feet above mean sea level (ft-msl)

NM = Not measured

NA = Data not available

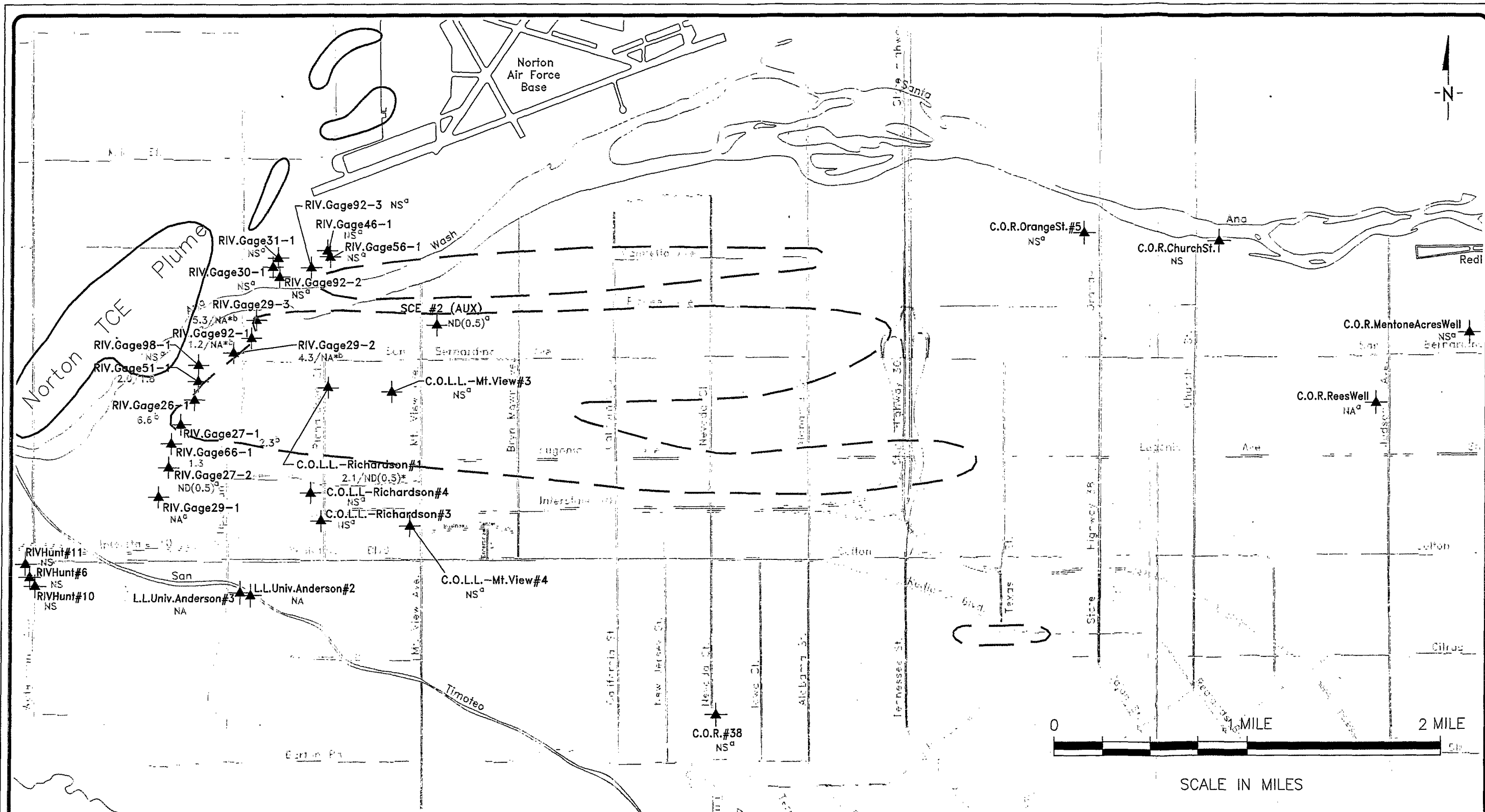
Static water levels were allowed to recover a minimum of 30 minutes to obtain a static water level measurement

TABLE 6

**WSCP PRODUCTION WELL SAMPLING PROGRAM
NOVEMBER 2001 SAMPLE IDENTIFICATIONS**

Well Number	Well Name	Sample Date	Sample Time	Sample Number Identification	Analyzed for Perchlorate	Analyzed for TCE
City of Loma Linda						
3106	Mountain View #3	NS	NS	NS	NS	NS
3171	Mountain View #4	NS	NS	NS	NS	NS
693	Richardson #1	11/1/2001	9:20	GW11-1	Yes	Yes
693	Richardson #1	11/15/2001	9:55	GW11-23	Yes	Yes
707	Richardson #3	NS	NS	NS	NS	NS
3132	Richardson #4	NS	NS	NS	NS	NS
City of Loma Linda Water Systems Sampling Points						
2967	Mountain View Blend - Lawton	11/1/2001	10:55	GW11-3	Yes	Yes
2968	Richardson Blend	11/1/2001	10:10	GW11-2	Yes	Yes
Mountain View Power (Formerly Southern California Edison)						
554	SCE #2 (AUX)	11/2/2001	13:40	GW11-22	Yes	Yes
Loma Linda University						
267	LL Univ Anderson #2	11/1/2001	13:45	GW11-5	Yes	NA
717	LL Univ Anderson #3	11/1/2001	13:55	GW11-6	Yes	NA
City of Riverside (Gage System)						
252	Gage #26-1	11/2/2001	10:10	GW11-15	Yes	Yes
258	Gage #27-1	11/2/2001	12:45	GW11-21	Yes	Yes
259	Gage #27-2	11/2/2001	11:30	GW11-19	Yes	Yes
260	Gage #29-1	11/2/2001	12:25	GW11-20	Yes	No
219	Gage #29-2	11/2/2001	9:50	GW11-14	Yes	Yes
219	Gage #29-2	11/15/2001	11:15	GW11-27	Yes	No
220	Gage #29-3	11/2/2001	9:20	GW11-13	Yes	Yes
220	Gage #29-3	11/15/2001	10:50	GW11-25	Yes	No
220	Gage #29-3 (Duplicate)	11/15/2001	11:00	GW11-26	Yes	No
218	Gage #30-1	NS	NS	NS	NS	NS
214	Gage #31-1	NS	NS	NS	NS	NS
215	Gage #46-1	NS	NS	NS	NS	NS
253	Gage #51-1	11/2/2001	10:30	GW11-16	Yes	Yes
253	Gage #51-1	11/2/2001	10:40	GW11-17	Yes	Yes
216	Gage #56-1	NS	NS	NS	NS	NS
257	Gage #66-1	11/2/2001	11:05	GW11-18	Yes	Yes
644	Gage #92-1	11/2/2001	8:50	GW11-12	Yes	Yes
644	Gage #92-1	11/15/2001	10:35	GW11-24	Yes	No
641	Gage #92-2	NS	NS	NS	NS	NS
642	Gage #92-3	NS	NS	NS	NS	NS
3091	Gage #98-1	NS	NS	NS	NS	NS
City of Riverside (Waterman System)						
273	Hunt #6	NS	NS	NS	NS	NS
271	Hunt #10	NS	NS	NS	NS	NS
272	Hunt #11	NS	NS	NS	NS	NS
City of Riverside Water Systems Sampling Points						
2946	Iowa Booster (Waterman)	11/1/2001	14:30	GW11-7	Yes	Yes
2946	Iowa Booster (Waterman) Duplicate	11/1/2001	14:35	GW11-8	Yes	Yes
2947	Gage Delivery (Gage)	11/1/2001	15:10	GW11-9	Yes	Yes
2948	7th & Chicago (Reservoir)	11/1/2001	15:35	GW11-10	Yes	Yes
3018	Gage Arlington	11/1/2001	16:05	GW11-11	Yes	NA
City of Redlands						
542	COR Church St	NS	NS	NS	NS	NS
2673	COR #38	NS	NS	NS	NS	NS
535	COR Mentone Acres	NS	NS	NS	NS	NS
29	COR Orange St	NS	NS	NS	NS	NS
74	COR Rees	11/1/2001	11:45	GW11-4	Yes	No

FIGURES



EXPLANATION

▲ Wells Currently Sampled Under the Existing WSCP Sampling Program

3.2 TCE Results ($\mu\text{g/L}$)

a Quarterly Sampling Results

b Well Currently Being Treated for TCE

c Water Purged to Waste and not Into System

L:\REMEDIATION\LMC\WSCP\CAD\MONTHLY REPORT\NOVEMBER01\TCEREP.DWG

-- 5 -- Approximate TCE Plume Location 5 $\mu\text{g/L}$ (2000 Interpretation of Redlands Plume)

-- 5 -- Approximate TCE Plume Location 5 $\mu\text{g/L}$ (Earth Tech June 1999 Interpretation of Norton AFB Plume)

ND(0.5) Not Detected at Indicated Detection Limit

NS Not Sampled

NA Not Analyzed

* Twice-Monthly Sampling Results

Blending Point Sampling Data

ND(0.5)	C.O.L.L. Mountain View Blend at Lawton
ND(0.5)	C.O.L.L. Richardson Blend
ND(0.5)/ND(0.5)	Riv. Iowa Booster (Waterman)
0.56	Riv. Gage Delivery (Gage)
ND(0.5)	Riv. 7th + Chicago (Reservoir)
NA	Gage Arlington

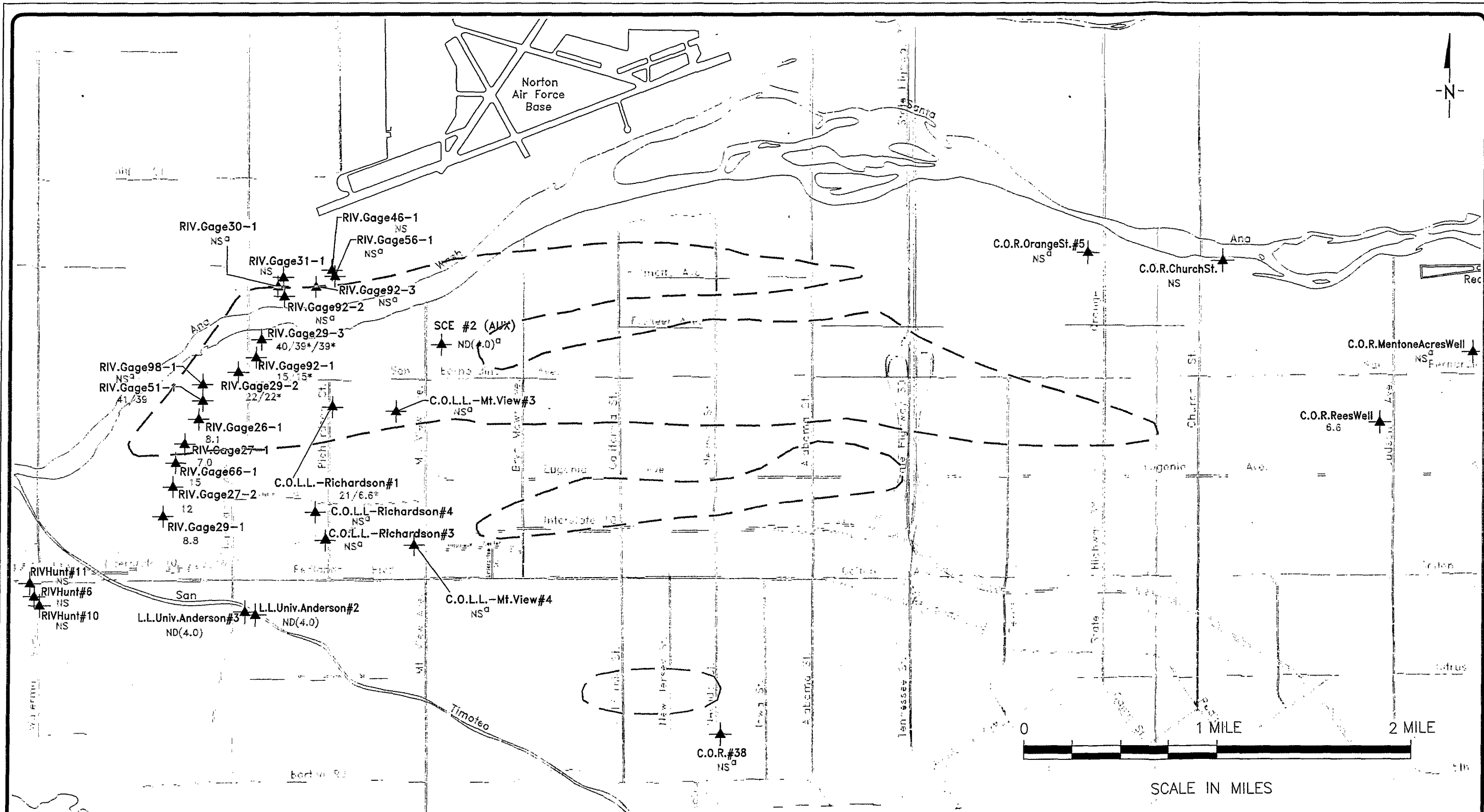
TITLE: WSCP Production Well Sampling Program
TCE Data Results November 2001

LOCATION: LOCKHEED MARTIN
REDLANDS, CALIFORNIA

EARTH TECH
A TUCSON INTERNATIONAL LTD. COMPANY

CHECKED: Liles Cobb
DRAFTED: Mahir Waber
PROJ.: 38872
DATE: 01/18/01

FIGURE:
1



EXPLANATION

- ▲ Wells Currently Sampled Under the Existing WSCP Sampling Program
- 18- Approximate 18 µg/L Perchlorate Plume Location (2001 Interpretation)
- * Twice-Monthly Sampling Results

- 46 Perchlorate (µg/L) Results
- ND(4.0) Not Detected at Indicated Detection Limit
- NS Not Sampled
- a Quarterly Sampling Results
- b Water Purged to Waste and not Into System

Blending Point Sampling Data

ND(4.0)	C.O.L.L. Mountain View Blend - Lawton
ND(4.0)	C.O.L.L. Richardson Blend
ND(4.0)/ND(4.0)	Riv. Iowa Booster (Waterman)
9.6	Riv. Gage Delivery (Gage)
7.9	Riv. 7th + Chicago (Reservoir)
6.3	Gage Arlington

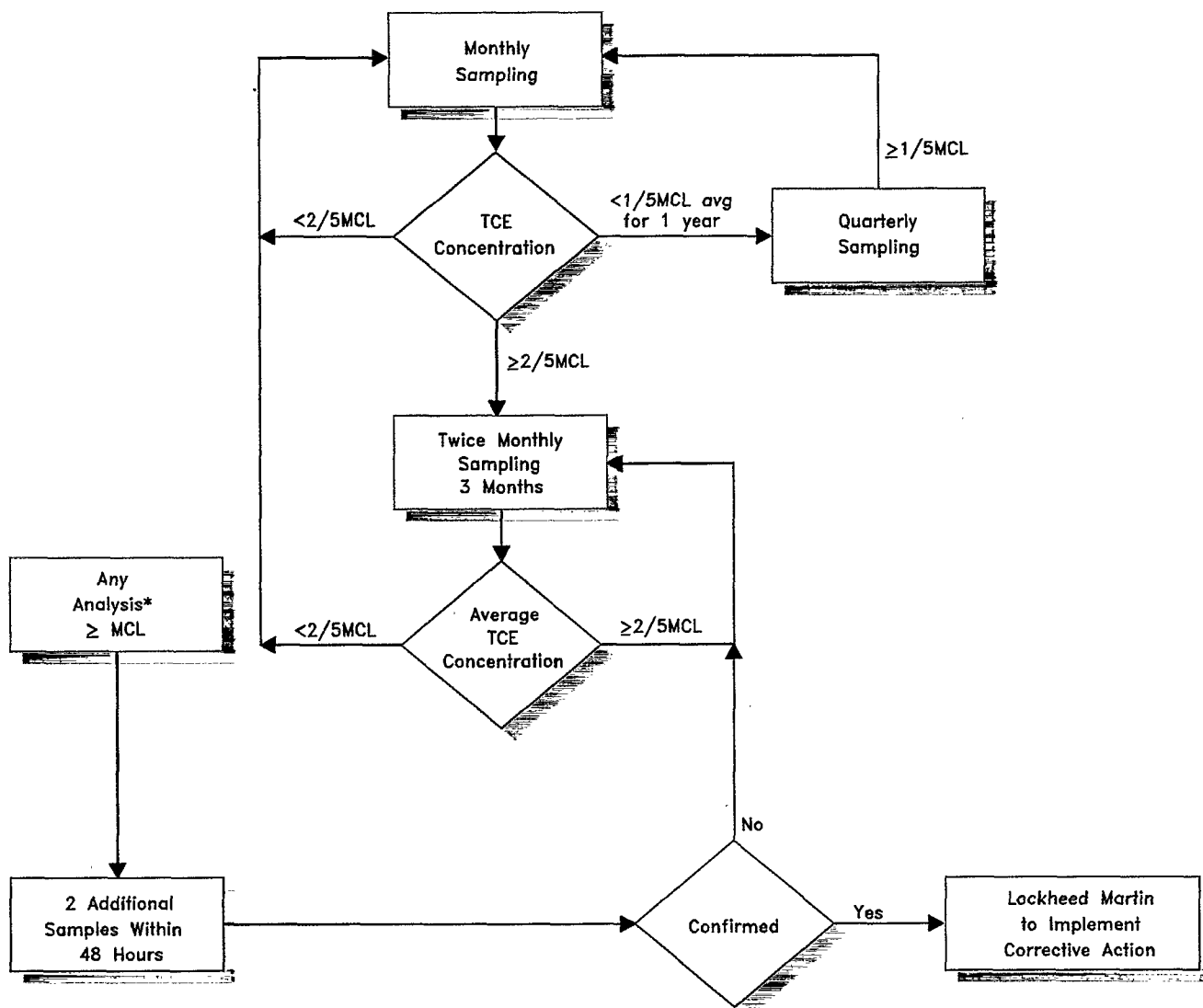
TITLE: WSCP Production Well Sampling Program
Perchlorate Data Results November 2001

LOCATION: LOCKHEED MARTIN
REDLANDS, CALIFORNIA

EARTH TECH
A HYDRO INTERNATIONAL LTD. COMPANY

CHECKED:	Liles Cobb
DRAFTED:	Mahir Waber
PROJ.:	38872
DATE:	01/18/01

FIGURE:
2




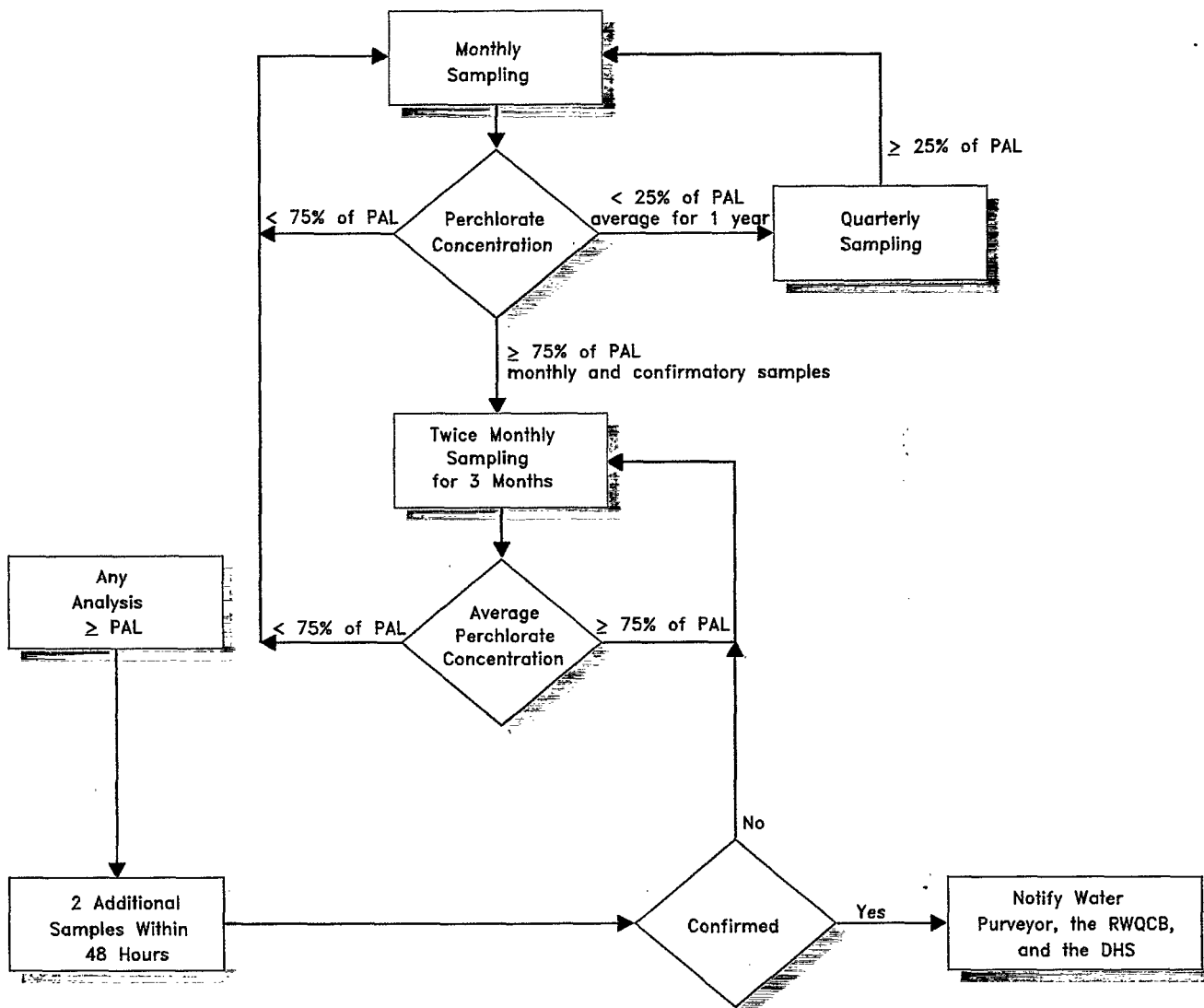
Footnote:

* If, at a specific well, blending is occurring to provide acceptable water for compounds other than TCE, then no corrective action may be necessary as long as the concentration of TCE is less than 5.0 µg/L in the finished water.

TCE MCL = 5 µg/L (California Regulations, Title 22, Division 4, Chapter 15, Section 64444)

L:\REMEDATION\LMC\WSCP\CAD\TCMATRIXFIG-3.dwg

TITLE: Decision Matrix for Sampling of Production Wells for TCE from the Crafton-Redlands Plume		
LOCATION: LOCKHEED MARTIN REDLANDS, CALIFORNIA		
EARTH  TECH <small>A tyco INTERNATIONAL LTD. COMPANY</small>	CHECKED:	Liles Cobb
	DRAFTED:	Lee Mehr
	PROJ.:	38872
	DATE:	04/28/00
		FIGURE: 3



Footnote:

Perchlorate Provisional Action Level (PAL) = 18 µg/L (California Department of Health Services, May 1997)

TITLE:

Decision Matrix for Sampling Production Wells for Perchlorate

LOCATION:

LOCKHEED MARTIN
REDLANDS, CALIFORNIA

EARTH TECH

A tyco INTERNATIONAL LTD. COMPANY

CHECKED: Liles Cobb

DRAFTED: Lee Mehr

PROJ.: 38872

DATE: 04/28/00

FIGURE:

4

ATTACHMENT A
FIELD SAMPLE FORMS
(Available Upon Request)

ATTACHMENT B

**CHAIN-OF-CUSTODY RECORDS AND
LABORATORY DATA SHEETS AND LEVEL III MODIFIED
QUALITY ASSURANCE/QUALITY CONTROL DOCUMENTATION
(Available Upon Request)**